

# Agreements and Queue Management

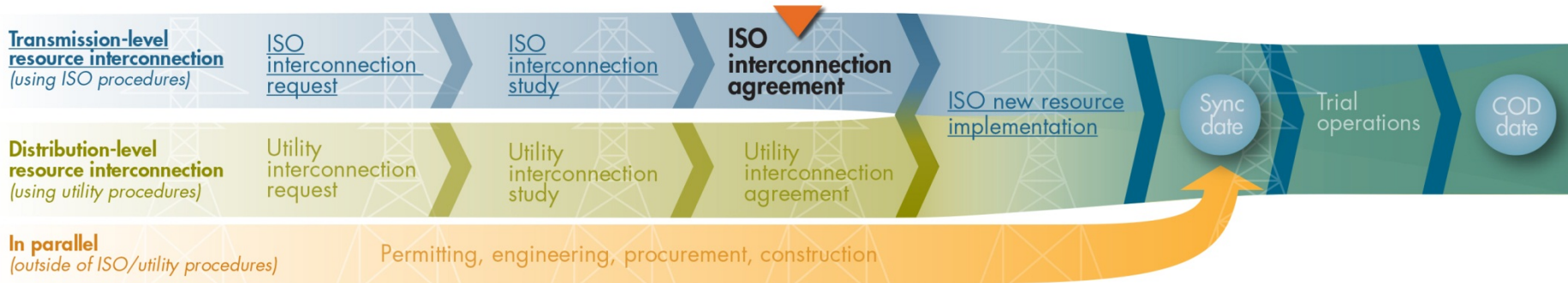
## Infrastructure Contracts and Management

- ❖ Joanne Bradley, Queue Management
- ❖ Shoukat Ansari, Contract Negotiation
- ❖ PJ Topping, Regulatory Contracts

February 27, 2019

# Interconnection Process Map

You are here



# Agenda

- 2018 Interconnection Process Enhancements
- Contract Negotiation
- Regulatory Contracts
- Queue Management

# 2018 Interconnection Process Enhancements (IPE)

# 2018 IPE Changes

- New Resource Implementation (NRI) requirements
- Suspension requirements
- Timing of fuel type changes
- Elimination of balance sheet financing options
- Energy only conversion cost responsibility
- Post COD modification measures
- Repowering deposit
- Repowering evaluation criteria – BPM change
- Replacing existing generator with energy storage - BPM change



# Contract Negotiation

Shoukat Ansari, Senior Contracts Negotiator

# Generator Interconnection Agreement (GIA)

- A Project interconnecting to the CAISO Controlled Grid shall execute a 3-party generator interconnection agreement between the Interconnection Customer, the Participating TO and the CAISO
- The Generator Interconnection Agreement consists of:
  - Pro forma approved by Federal Energy Regulatory Commission
  - Appendices specific to an Interconnection Customer and Generating Facility at a single Point of Interconnection
  - The GIA is specific to an interconnection customer and its generating facility and may cover more than one Resource ID and CAISO Queue Position
- A Project interconnecting to the non-CAISO controlled grid may execute a 2 party agreement with the Participating TO or the UDC

# Generating Unit Conversions to the CAISO Markets

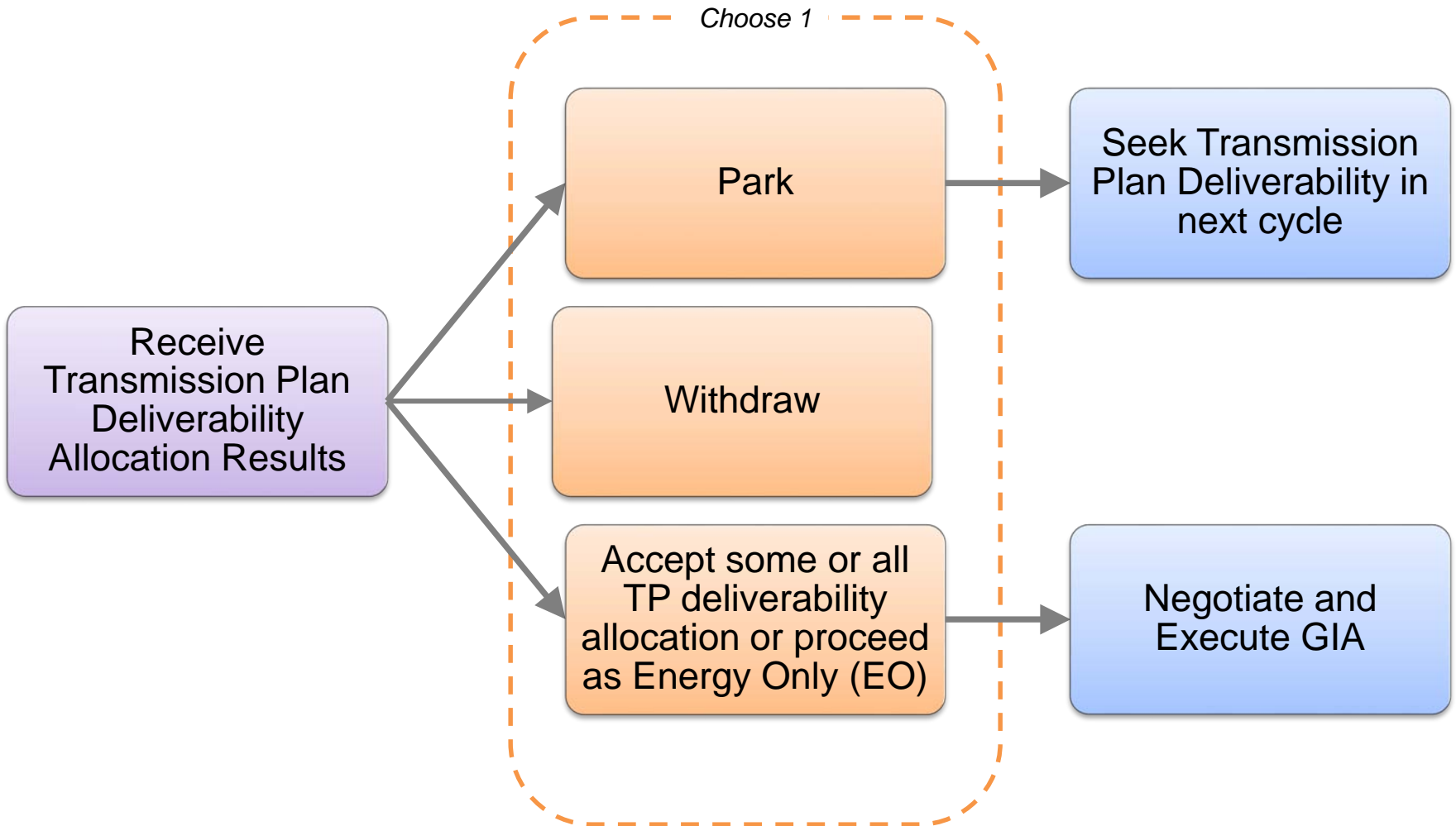
- Qualifying Facilities (QFs) and other existing generators usually convert upon termination or expiration of their power purchase agreements and interconnection agreements based on Section 25.1.2 of CAISO Tariff
- Interconnection Service capacity based on existing operating capacity and historical generation of the generating facility
- An email request to [RegulatoryContracts@caiso.com](mailto:RegulatoryContracts@caiso.com) initiates the conversion process



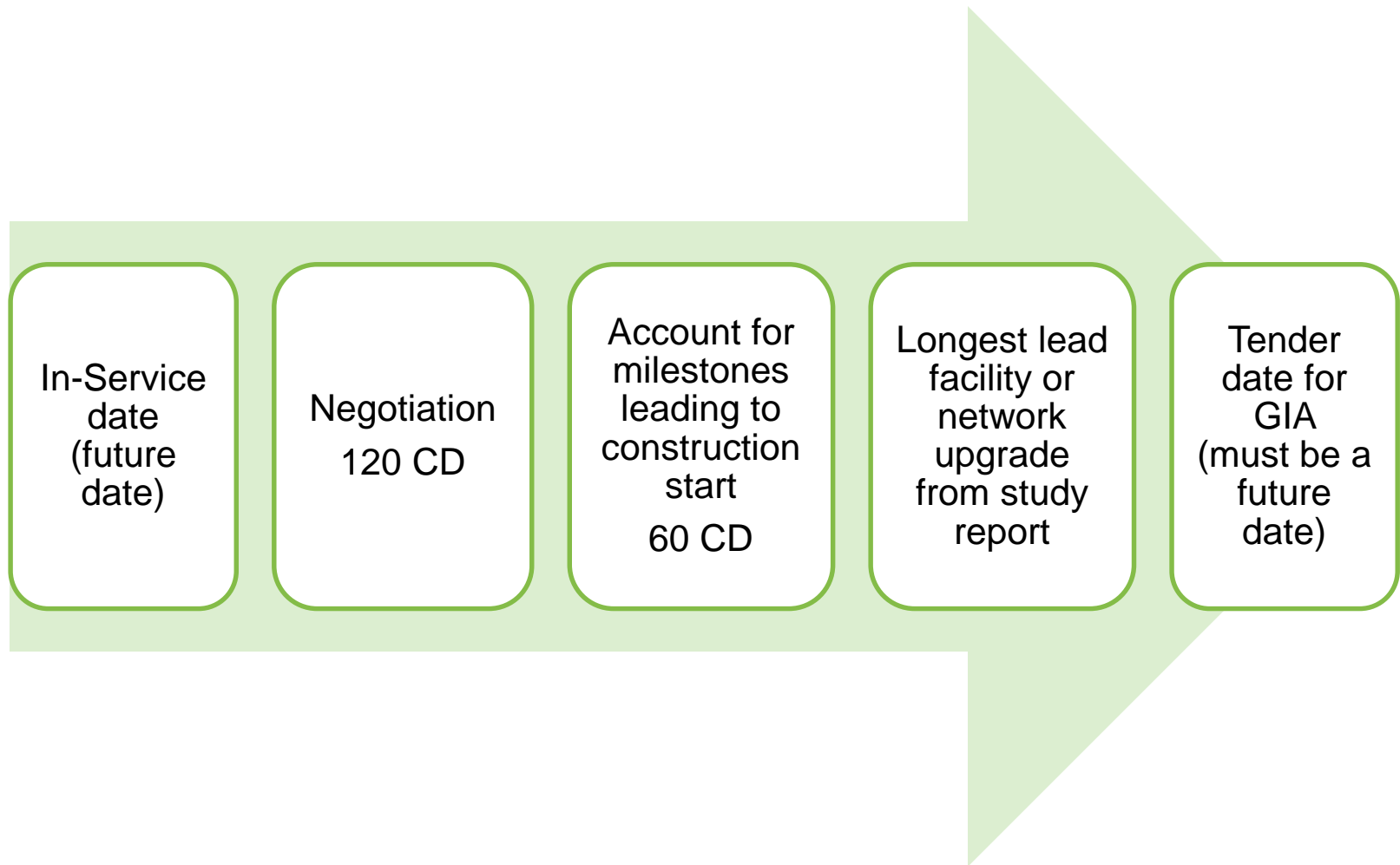
## Generating Unit Conversions (Continued)

- Generating Unit Conversions require other Market Agreements and participation in the NRI Process
- 2018 IPE filing with FERC clarifies and requires the NRI process\*
- NRI process duration is being reduced from 203 to 84 calendar days around September/October 2019 timeframe

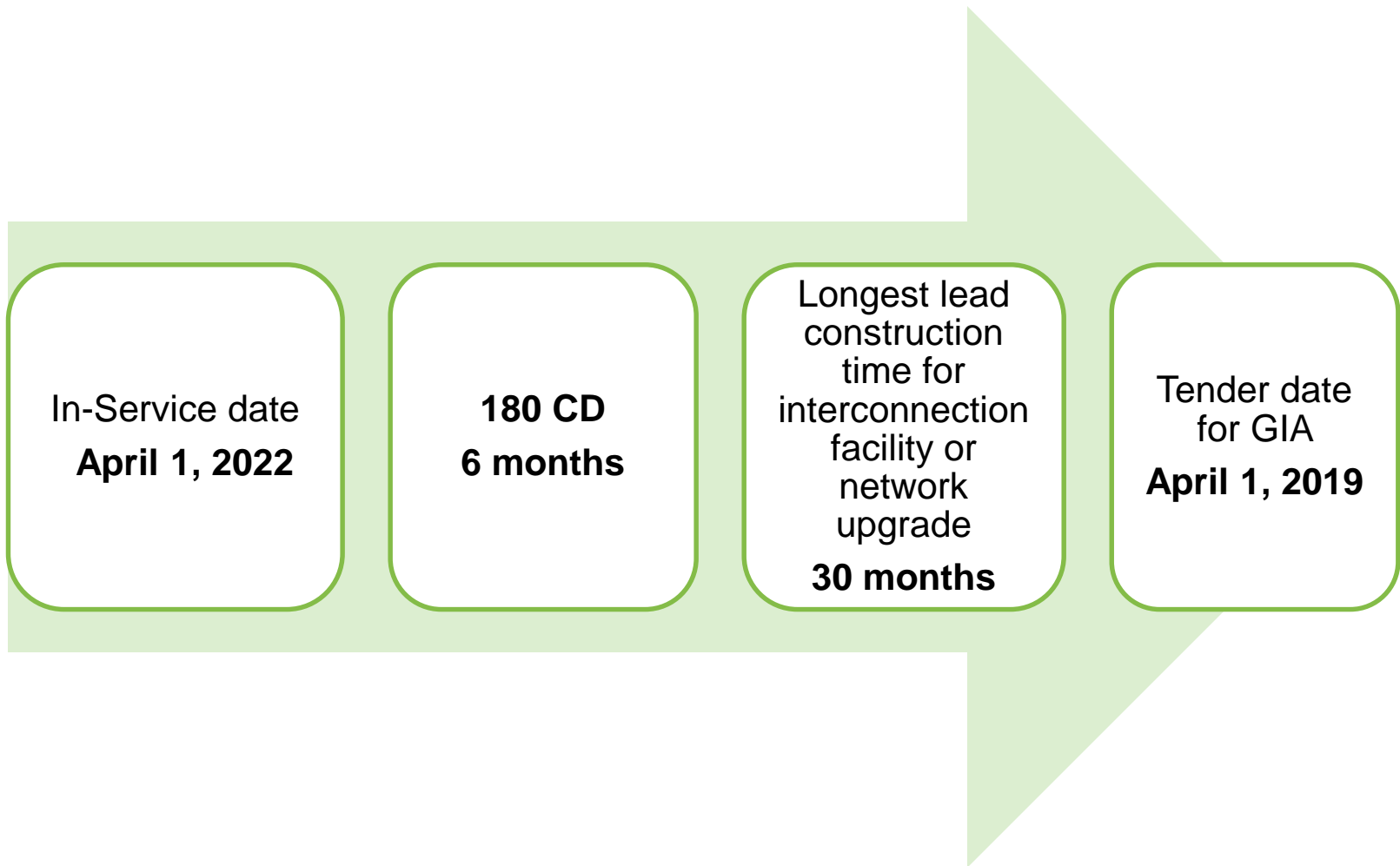
# GIA Implications for Transmission Plan Deliverability Allocation Choices



# GIA Tender



# GIA Tender (Calculation Example)



# GIA Negotiation

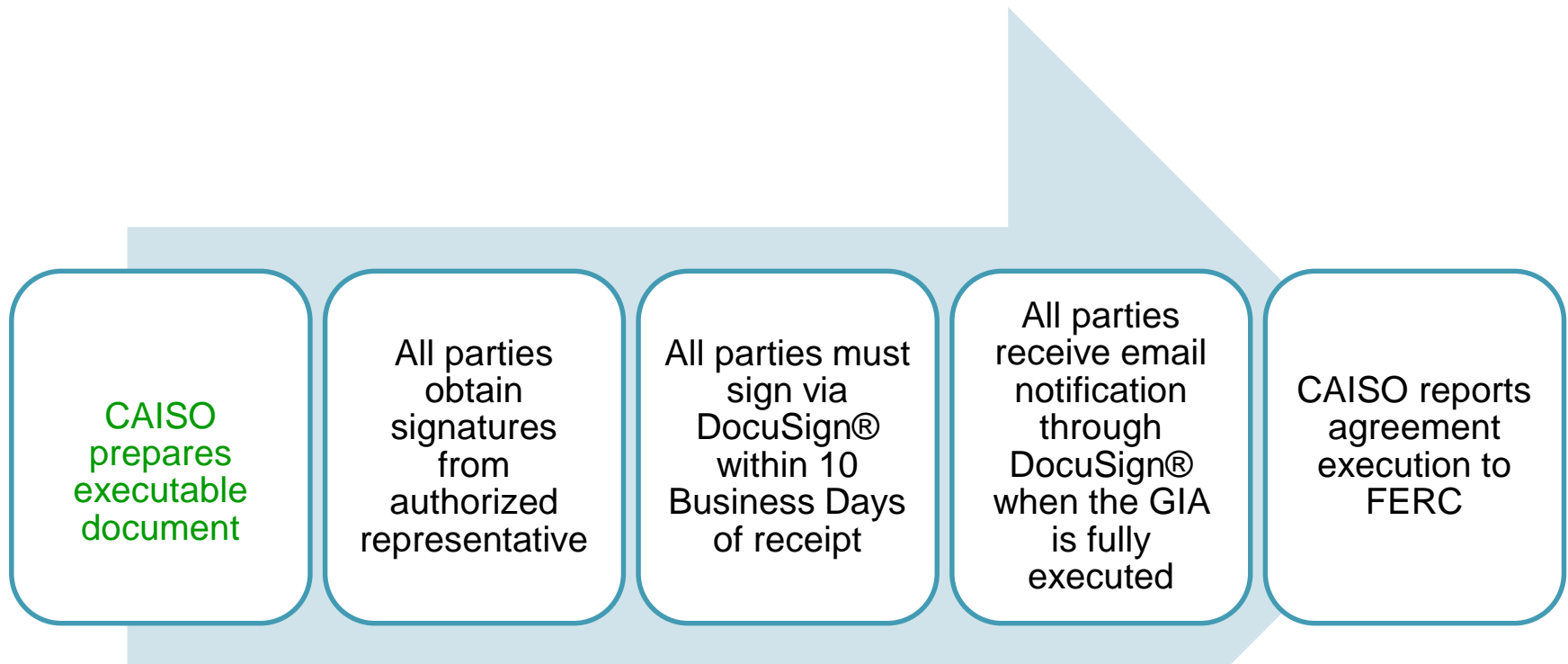
- The Participating TO tenders the GIA to the parties
- Contract Negotiators of the three parties negotiate the draft and come to an agreement on a draft
- Participating TO approves the draft and sends to CAISO
- Contract Negotiator does a final check, prepares signing statements, gets information requests from the Participating TO and IC and sends the package to RC

# Questions?

# Regulatory Contracts

PJ Topping, Contracts Analyst

# GIA Execution Process



- Agreement are distributed for execution via email through **DocuSign.**
- Final version of executed GIA is available for parties to download or print
- DocuSign Account is not mandatory in order to use their service



# Market Agreements

- Terms for participating in CAISO markets
  - Participating Generator Agreement (PGA) or Net Scheduled Participating Generator Agreement (NSPGA)
  - Participating Load Agreement (PLA) (e.g., pumps, pump-generating, energy storage)
  - Meter Service Agreement for a CAISO Metered Entity (MSACAIOME)
  - Meter Service Agreement for Scheduling Coordinators (MSASC)
  - Scheduling Coordinator Agreement (SCA)

# Contract Changes

Submit requests to [RegulatoryContracts@caiso.com](mailto:RegulatoryContracts@caiso.com)

## Changes to Customer Information

- Assignments to affiliates and non affiliates
  - Assignee must meet the PTO's Interconnection Financial Security ("IFS") posting requirements
- Entity Name changes only
- Ownership changes

## Required Documentation (varies on type of change)

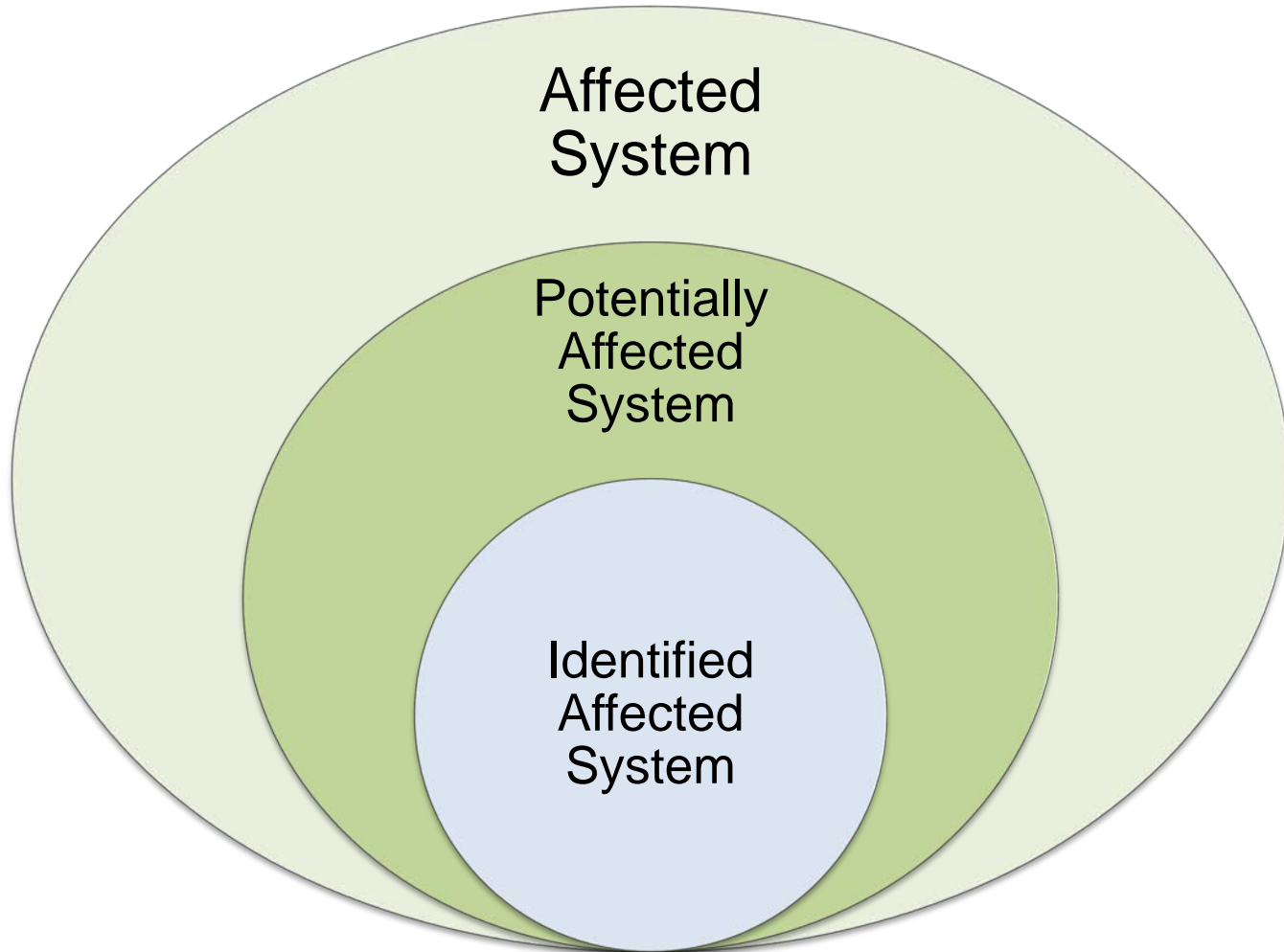
- Secretary of State certificate
- Proof of ownership
  - Sale agreement
  - Membership interest agreement

# Questions?

# Queue Management

Joanne Bradley, Lead Queue Management Specialist

# Affected Systems



# Affected System Process

## Potentially Affected System

- CAISO invites Potentially Affected Systems to scoping meeting and Phase I results meeting
- Must identify as Identified Affected Systems within 60 calendar days of notification from the CAISO after initial Interconnection Financial Security has been posted.

## Identified Affected system

- CAISO will notify Interconnection Customer of their Identified Affected Systems
- Interconnection Customer to affirmatively contact the Identified Affected System operators and make reasonable efforts to address system impacts

## Impacts Resolved

- Impacts must be resolved no later than six months prior to the generating unit's Initial Synchronization Date

# Upcoming Affected System Outreach

- **Cluster 11**

- The CAISO will reach out to Potentially Affected Systems after projects post Initial Financial Security (May 2019)
- Potentially Affected Systems must identify themselves as Identified Affected Systems within 60 days of CAISO notification
- CAISO will notify Interconnection Customers of their Identified Affected Systems (August 2019)

# Modifications to Interconnection Requests

## Before Phase II Results Meeting Minutes are published

- Certain changes are allowed without a Material Modification Assessment (MMA) between Phase I and Phase II
- Modification requests are processed by your Interconnection Specialist

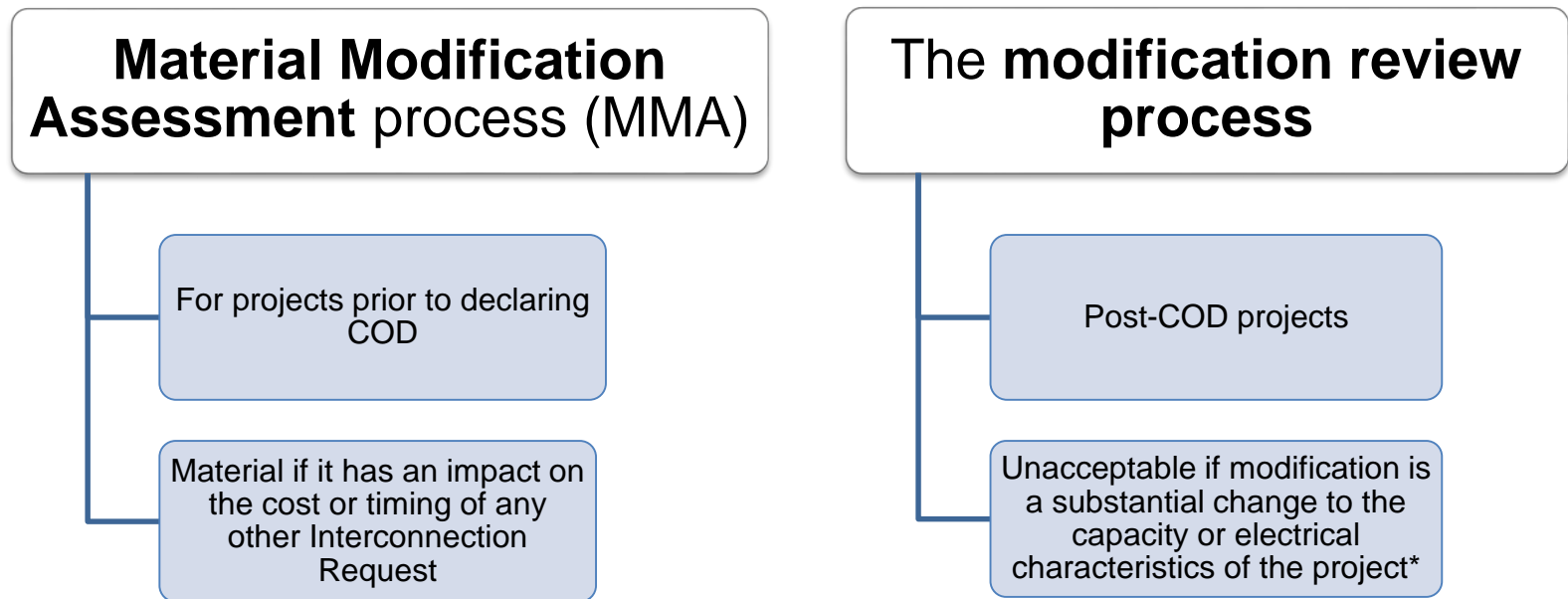
## After Phase II Results Meeting Minutes are published

- Any modifications require MMA
- Modification requests are processed by [QueueManagement@caiso.com](mailto:QueueManagement@caiso.com)



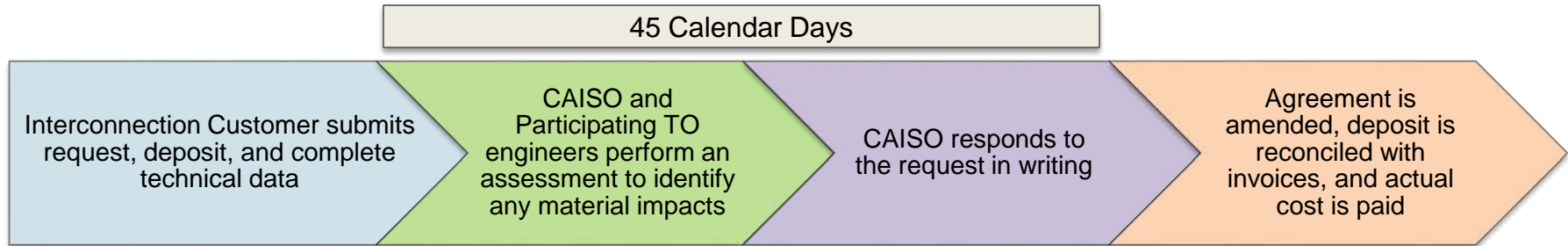
# Modification Review Process

- Two very similar processes for modification requests



\* 2018 IPE Update

# Modification Review Process contd.



- Submit request with justification in writing to [QueueManagement@caiso.com](mailto:QueueManagement@caiso.com)
- Modifications requiring technical data take more time for technical data validation
- The deposit amount is \$10,000
  - Interconnection Customer will be charged actual costs incurred by the CAISO and Participating TO, and remaining deposit, if any, is returned

# Modifications Subject to Commercial Viability

- Projects requesting to extend their Commercial Operation Date (COD) beyond 7 years or modifications to projects that have already exceeded the 7 years are subject to Commercial Viability Criteria\*
  - Criteria includes permitting, power purchase agreement status, site exclusivity, and GIA status
  - Failure to meet criteria results in conversion to Energy Only deliverability status
  - Limited exemption for no power purchase agreement
    - One year delay for conversion to Energy Only

\* 2018 IPE Update

## Modifications Subject to Commercial Viability contd.

- Criteria can no longer be met with balance sheet financing\*
- Power purchase agreement must reflect the point of interconnection, capacity, fuel type, technology, and site location of project\*
- Energy Only conversion will result in a reduction to cost responsibility only if assigned upgrades are eliminated\*
- Fuel type modifications after the 7 year timeline are prohibited\*
  - Modifications to add storage are not considered fuel-type modifications

\* 2018 IPE Update

# Modifications to Add Energy Storage

- Projects may request to add energy storage to their Interconnection Request or operating Generating Facility
  - Energy storage addition does not alter the approved Net-to-Grid MW capacity
  - If a project is wholly replaced or increasing the Net-to-Grid MW then a new Interconnection Request is required
  - If an energy storage modification request is denied, the CAISO will work with the Interconnection Customer to identify how much energy storage might be acceptable
- If an existing Generating Facility that has added energy storage is retiring, an assessment will determine if the energy storage can continue to operate\*

\* 2018 IPE Update

## Modifications to Add Energy Storage contd.

- Energy storage may request deliverability if energy storage can meet the resource adequacy requirements
- Project must retain the maximum deliverability associated with the maximum on-peak exceedance level used in the most recent Deliverability Assessment
  - Example: 100 MW Solar project proposes to replace 20 MW with energy storage, resulting in 80 MW solar and 20 MW energy storage

The exceedance value for Solar is 90% and has 90 MW of associated Deliverability

Options for splitting deliverability:

	Solar (90% exceedance value)	Energy Storage (100% exceedance value)
Option 1:	70 MW & PCDS	20 MW & FCDS
Option 2:	72 MW & PCDS	18 MW & PCDS

# Technical Bulletin for Hybrid Energy Storage

- On October 19, 2016, the CAISO posted a technical bulletin for “Implementation of Hybrid Energy Storage Generating Facilities”
- Covers master file modelling, metering and telemetry, interconnection and resource ID selection
- <https://www.caiso.com/Documents/TechnicalBulletin-ImplementationofHybridEnergyStorageGeneratingFacilities.pdf>

# Suspension

- LGIAs include suspension rights for a period of up to 3 years
- Suspension notifications should be sent to [QueueManagement@caiso.com](mailto:QueueManagement@caiso.com) and the PTO
- Notifications should include the effective date of the suspension and good faith estimate of how long a suspension will last\*
- A material modification assessment will be required if milestone dates are changing\*
  - If material impacts can be mitigated the suspension can be approved
- Suspension does not apply to shared upgrades

\* 2018 IPE Update



# Repowering Requests

- Repowering is for existing generating facilities, including QFs, that wish to make changes that are not substantial
  - Facilities who propose substantial changes must enter Generation Interconnection and Deliverability Allocation Procedures (GIDAP)
  - Substantiality is determined based on impact of changed electrical characteristics as outlined in the Generator Management BPM
- Must utilize the same fuel source and point of interconnection
  - Energy storage can be considered the same fuel source
  - May require a facilities study with the Participating TO
- Affidavit to [QueueManagement@caiso.com](mailto:QueueManagement@caiso.com) initiates the request
  - Information provided in the affidavit is subject to audit by the CAISO
- Study deposit is \$50,000\*

\* 2018 IPE Update

# Queue Management

## GIA Milestone tracking

- Interconnection Customers must meet the project milestones in their GIA to be in good standing
  - Deliverability may not be reserved for projects not in good standing
- Interconnection Customers provide quarterly project progress reports to Queue Management after the GIA is effective

## Queue Management cont.

- Prior to Initial Synchronization and COD Queue Management verifies contract obligations have been met
  - Upgrades
  - Inverters
  - Affected Systems
  - Asynchronous Obligations
  - MW values in GIA, PGA, and Master File
  - WECC Path Rating and Progress Report Policies and Procedures
- Upon verification, Queue Management provides approval in the New Resource Implementation (NRI) process

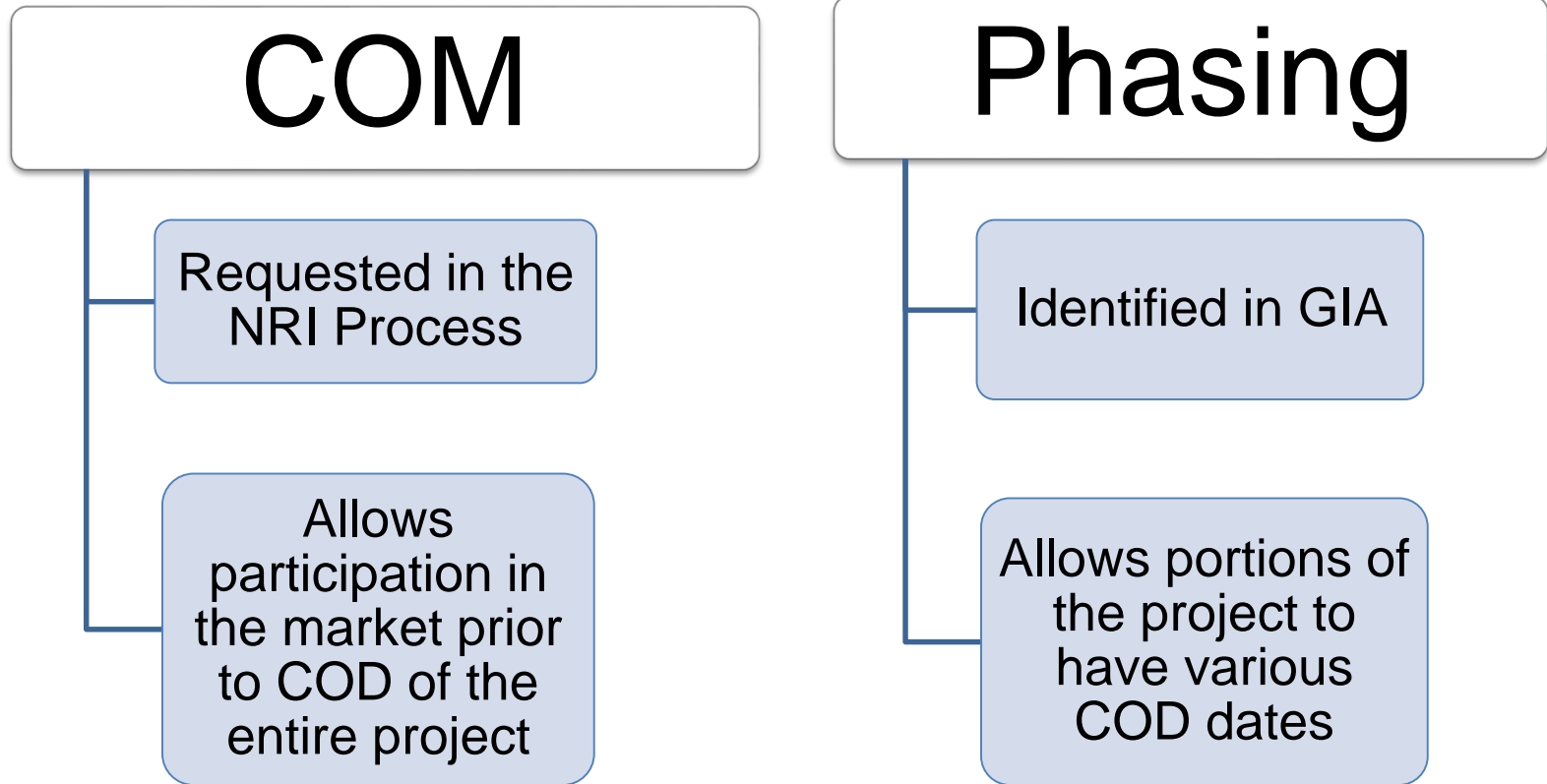
## Queue Management cont.

- All reliability network upgrades and pre-cursor transmission projects must be in-service prior to initial synchronization date
- Limited Operation Studies
  - Can be used to evaluate if system can support early, energy-only interconnection before network upgrades and interconnection facilities are complete
  - The study is paid for by the Interconnection Customer
  - Only within 5 months of Initial Synchronization
  - Submit request to [QueueManagement@caiso.com](mailto:QueueManagement@caiso.com)
  - Results of the study determine the operating capability of the project

# Commercial Operation for Markets (COM)

- Block implementation in advance of COD of the project
- CAISO acknowledges wind and solar block construction and ability to energize
- Portion of project is allowed to bid into CAISO markets while remaining portion is testing or under construction
- Resource adequacy eligibility requirements
  - Qualifying capacity must be obtained from the CA Public Utilities Commission
  - Obligated to meet all tariff and resource adequacy requirements (bid, penalty, etc.)
  - Reliability network upgrades must be completed

# COM versus Phasing



# Resources

- Contracts and agreements  
<http://www.caiso.com/rules/Pages/ContractsAgreements/Default.aspx>
- 2018 IPE Stakeholder Initiative  
<http://www.caiso.com/informed/Pages/StakeholderProcesses/InterconnectionProcessEnhancements.aspx>
- QF Affidavit Template  
<https://www.caiso.com/Documents/AffidavitTemplate.doc>
- Potentially Affected System Contact List  
[http://www.caiso.com/Documents/GeneratorInterconnectionProcedures\\_AffectedSystemsContactList.xls](http://www.caiso.com/Documents/GeneratorInterconnectionProcedures_AffectedSystemsContactList.xls)
- Repowering Affidavit Template  
[http://www.caiso.com/Documents/RepoweringAffidavitTemplate\\_20141002.doc](http://www.caiso.com/Documents/RepoweringAffidavitTemplate_20141002.doc)
- Technical Bulletin: Implementation of Hybrid Energy Storage Generating Facilities  
<http://www.caiso.com/market/Pages/ReportsBulletins/Default.aspx>
- Quarterly Status Report Template  
<http://www.caiso.com/Documents/QueueManagementQuarterlyStatusReportTemplate.docx>

# Thank you!

- If you have any further questions on the content in this presentation, please send them to

[RegulatoryContracts@caiso.com](mailto:RegulatoryContracts@caiso.com) or  
[QueueManagement@caiso.com](mailto:QueueManagement@caiso.com)



# Questions?